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# *Children's Coping with Peer Rejection: The Role of Depressive Symptoms, Social Competence, and Gender*

Albert Reijntjes<sup>a,b,\*</sup>, Hedy Stegge<sup>a,b</sup> and Mark Meerum Terwogt<sup>b</sup>

<sup>a</sup>PI Research, Duivendrecht, The Netherlands

<sup>b</sup>Vrije Universiteit, Amsterdam, The Netherlands

The present study investigated children's anticipated emotional response and anticipated coping in response to peer rejection, as well as the qualifying effects of gender, depressive symptoms, and perceived social competence. Participants ( $N = 234$ ), ranging in age between 10 and 13 years, were presented with two written vignettes depicting peer rejection. The most highly endorsed coping strategies were behavioural distraction, problem-focused behaviour, and positive reappraisal. Results indicate that children higher in depressive symptoms reported a more negative anticipated mood impact. Moreover, children higher in depressive symptoms were less inclined to endorse behavioural and cognitive coping strategies typically associated with mood improvement (e.g., behavioural distraction, positive reappraisal). Independent of depression, children scoring higher on perceived social competence reported more active, problem-oriented coping behaviour in response to the stressors. Types of coping were largely unaffected by gender, however girls reported higher levels of anticipated sadness than boys in response to the rejection vignettes. Theoretical and clinical implications are discussed. Copyright © 2006 John Wiley & Sons, Ltd.

*Key words:* peer rejection; coping; depressive symptoms; social competence; pre-adolescent children

With increasing age, peers assume greater importance in children's lives. By age 11, nearly 50% of children's social activities involve peers (Grusec and Lytton, 1988). Interactions with peers assist in the formation of accurate social perceptions and facilitates cooperative and competitive activities, including play and sports (Hartup, 1983). Moreover, through both direct and vicarious experiences with peers, children acquire important skills in the cognitive,

\*Correspondence to: Department of Developmental Psychology, Vrije Universiteit Amsterdam, Van der Boechorststraat 1, 1081 BT Amsterdam, The Netherlands.  
E-mail: a.reijntjes@planet.nl

behavioural, and social domains. However, peer interactions are also fraught with significant challenges. In their day-to-day lives children are frequently confronted with a variety of stressful peer encounters, including verbal ridicule/teasing, verbal-physical threat and aggression, object disagreements, perceived unfairness, and being excluded or shunned (Hartup, 1983). Children's capabilities to monitor and navigate these demanding peer interactions are constantly tested. Those displaying friendly, prosocial, responsive behaviour and positive interactions are more likely to be accepted by their peers, whereas children who show ineptitude in their approaches to others (e.g. aggressive behaviour, disrupting the ongoing interactions in a group, or excessive social withdrawal) are more likely to be rejected (Coie, 1990; Dodge, 1983).

Research on peer rejection has profound importance for better understanding social development. First, peer rejection ranks as a frequently experienced emotion-eliciting event in childhood (Nolan *et al.*, 2003; Spirito *et al.*, 1991) and is capable of invoking strong negative affect, feelings of loneliness, and social anxiety (Asher and Wheeler, 1985; Boivin *et al.*, 1994). Next, individual differences in how children deal with peer rejection experiences and manage the negative emotions they elicit have been linked to social and psychological adjustment (Sandstrom, 2004). Moreover, persistent peer rejection in early and middle childhood predicts subsequent externalizing behaviour problems including truancy, school dropout, involvement with antisocial peers and delinquency (e.g. Coie *et al.*, 1992; Kupersmidt and Coie, 1990). Although the mechanisms governing this linkage are still unclear, it has been suggested that children who experience frequent peer rejection are more inclined to attribute hostile intent to peers, more likely to generate inappropriately aggressive responses to peer rejection events, and are less skilled at enacting competent behavioural responses (Dodge *et al.*, 2003).

Repeated peer rejection over time also figures prominently in several internalizing emotional disorders, such as depression and social anxiety. In the case of depression, the threat of rejection often leads the depressed individual to engage in excessive reassurance seeking, which has the paradoxical effect of eliciting actual rejection from significant others (Coyne, 1976; Joiner, 1999). Some have postulated a vicious cycle between social rejection and depression (e.g. Coyne, 1976). Consistent with this formulation, Vernberg (1990) found that rejection and depression serve as prospective predictors of each other among young adolescents.

Although research on peer rejection during the past decades has yielded an increased understanding of its correlates and consequences (see Zakriski *et al.*, 1997 for a review), few studies have applied a coping framework to investigate peer rejection. The little work that has been done has focused predominantly on how two distinct types of children (i.e. aggressive and non-aggressive) cope with sustained peer rejection. For instance, Zakriski and colleagues (Zakriski and Coie, 1996; Zakriski *et al.*, 1997) have shown considerable complexity in the linkages between children's status group (i.e. aggressive rejected vs non-aggressive rejected), their preferred coping style, and psychological adjustment. Specifically, the blunting coping style typically observed among aggressive-rejected children seems to be associated with increased likelihood of sustained rejection, as well as a variety of other negative outcomes such as academic failure and delinquency (Zakriski *et al.*, 1997). Conversely, non-aggressive rejected children are more likely to adopt a monitoring or sensitizing coping style, which is linked to higher levels of distress in the short term, but seems to increase the likelihood of more satisfying social relationships in the longer term.

Few studies have examined how children cope with everyday peer rejection experiences. However, in a notable exception, Bowker and colleagues examined the linkages between children's social standing in the peer group, behavioural style (aggressive vs withdrawn), and coping strategies in response to peer hassles, including rejection (Bowker *et al.*, 2000). Results revealed that more withdrawn children were more likely to engage in emotion-focused coping, and less likely to use problem-focused coping. Moreover, aggressive/unpopular boys and girls were most inclined to respond aggressively, whereas aggressive/popular girls reported using more problem-focused coping strategies.

Although the tendency to respond negatively to perceived rejection is likely to be universal, a body of work has revealed that children differ greatly in their sensitivity and reactions to rejection (e.g. Downey *et al.*, 1998; Dodge *et al.*, 2003; Sandstrom *et al.*, 2003). With regard to depression, there are data suggesting that children scoring higher on depressive symptoms may be vulnerable to heightened emotional response to interpersonal stressors such as peer rejection (Quiggle *et al.*, 1992). Moreover, in our previous work level of depressive symptoms was linked to children's endorsement of more negative, passive, and avoidant emotion-regulating strategies to cope with negative affect elicited by everyday stressors including peer problems. Previous work has also shown that girls report more distress and hurt feelings than boys when faced with peer rebuff (e.g. Galen and Underwood, 1997; Crick, 1995). In addition, Dodge and Feldman (1990) have provided evidence to suggest that girls are more likely than boys to respond passively when faced with peer difficulties.

A limitation of the existing work on individual differences in how children cope with peer related stressors including rejection involves its scope of inquiry. Although previous research has provided evidence to suggest a relationship between the coping strategies children employ in response to peer related stressors and several person variables, including indices of psychological adjustment, to date no study has made the link between appraisal of the rejection experience (i.e. level of distress) and subsequent coping strategy use. However, individual differences in children's appraisal of rejection are likely to influence how they respond, both behaviourally and cognitively, to negative rejection experiences. Thus, there is a need for research on peer rejection examining the potential interconnections among appraisal, coping, and person variables.

Over the past two decades, research with children and adolescents has clearly established the complex, multidimensional structure of coping (e.g. Ayers *et al.*, 1998; Walker *et al.*, 1997; Compas *et al.*, 2001). However, robust and theoretically meaningful dimensions that characterize coping during childhood and adolescence are still underdetermined. In our attempt to capture the diversity of children's possible coping responses when faced with peer rejection, we combined two broad and widely used dimensions of coping: cognitive vs behavioural coping, and engagement vs disengagement coping.

The cognitive-behavioural dimension discriminates between overt behavioural and covert cognitive coping responses. The engagement-disengagement distinction (e.g. Ebata and Moos, 1991) represents cognitive and behavioural responses oriented towards the source of stress, and responses oriented away from the stressor, respectively. Our two-dimensional approach, acknowledging that these dimensions are more likely to mirror complementary as opposed to orthogonal aspects of coping, yielded four broad methods of coping with peer rejection.

The overarching aim of the present study was to investigate children's anticipated emotional response and their anticipated use of several specific

coping strategies in response to vignette-depicted peer rejection. In so doing, we also examined the role of gender and level of depressive symptoms in predicting children's (a) anticipated emotional distress and (b) their self-reported use of cognitive and behavioural coping strategies, *above and beyond* the effect of anticipated appraisal/emotional distress. In addition to gender and level of depressive symptoms, we examined the role of perceived social competence. This variable was included given the social-evaluative nature of our stimulus material and evidence suggesting that higher competence in the social domain is positively associated with engagement coping (e.g. active problem-focused efforts; see Compas *et al.*, 2001 for a review).

We predicted that compared to boys, girls would respond to the peer rejection vignettes with higher levels of anticipated emotional distress and lower endorsement of direct solution-oriented coping (i.e. engagement coping). We also predicted that regardless of gender, children with higher depressive symptoms would display higher levels of anticipated subjective distress, greater reluctance to engage in active problem solving strategies, and would anticipate more negative cognitive reactions (e.g. greater tendency to catastrophize about the rejection, and a lower tendency to cope with the rejection by reappraising the rejection experience in a positive fashion). Finally, we predicted that children with higher levels of perceived social competence would display lower levels of anticipated subjective distress and would be more likely to endorse active problem solving and behavioural confrontation as anticipated coping strategies.

## METHOD

### *Participants*

Participants were 234 children (123 boys, 111 girls) attending five public elementary schools in a central metropolitan area in the Netherlands (near Utrecht). Children were enrolled in 5th and 6th grade classes and predominantly from a middle-class socioeconomic background. Within each school, complete classes participated. The response rate within classes ranged from 91.7 to 94.9%. The children ranged in age from 10 to 13 years of age ( $M = 11.6$ ,  $S.D. = 0.75$ ) and were predominantly Caucasian (94.7%). Written active parental consent was obtained for all study participants.

### *Stimulus Materials*

Two emotion-eliciting vignettes were developed for this study (see below). Each vignette consisted of a written paragraph describing a specific peer rejection experience. The depicted events are salient for school-age children and were developed based on literature suggesting that being excluded from group activities is a primary exemplar of peer rejection (Bush and Ladd, 2001; Coie, 1990). Participants were instructed to read each vignette carefully and to imagine that they were in the situation themselves.

*Vignette 1:* This vignette presented a hypothetical peer rejection situation that read as follows: *'Your class is on a class trip to the beach. First you swim for a while, but then you want to do something else. You have a look around, and you spot a group of children building a sandcastle. They are laughing a lot and clearly enjoy what they are doing. Moreover, the sandcastle is looking very good. You also think that it might be fun, and therefore you approach the children and ask them if you can join them. The children*

look at each other and start talking with each other while you are just waiting. While talking, several of the kids turn and look at you and then turn back to their friends and start laughing. After a while one child comes over and tells you that you can't join them and that you should leave.'

Vignette 2: This vignette also depicted a situation involving peer rejection, and read as follows: 'You just moved to another town. Today is your first day at school. Actually, you do not know anyone yet. After lunch, you have gym class. The gym teacher selects two children to pick teams for a baseball game. You hope that you will be one of the first kids chosen. The team captains look at you but choose the other kids to be on the team. Finally, you are the only kid left. Even the boy with a sprained ankle gets chosen ahead of you. The captain of one of the teams looks at you, shakes his head and says "I guess you have to play with us".'

## MEASURES

### *Anticipated Mood Impact*

For each vignette, participants were instructed to rate how sad they would feel if the situation actually happened to them using a 5 point Likert scale ranging from 1 (not at all) to 5 (extremely).

### *Coping Strategies*

In developing our coping strategies, we examined existing questionnaires and coding schemes designed to assess child and adolescent coping (e.g. Kliever, 1991; Ayers *et al.*, 1996; Bowker *et al.*, 2000). Three strategies (i.e. problem focused behaviour, behavioural confrontation, and mental avoidance) were borrowed directly from these existing coping measures. The other strategies were chosen based on our previous work (Stegge *et al.*, 2004).

For each strategy, participants rated on a scale ranging from 1 (would definitely not use) to 5 (would definitely use) the extent to which they would use the strategy if they were to actually find themselves in the situation. Similar to the commonly used 'Kidcope' coping measure (Spirito *et al.*, 1995), each coping strategy was represented by a one-item exemplar.

The specific coping strategies that were employed in the present study are presented below.

#### *Behavioural Engagement Strategies*

*Problem-Focused Behaviour:* This strategy refers to active, approach behaviour aimed to somehow solve or improve the negative event, e.g. 'I would ask a couple of other children to join me in building another sandcastle'.

*Behavioural Confrontation:* This strategy involves verbally confronting the rejecting persons, e.g. 'I would ask the children from that group why they did not want me to participate'.

#### *Behavioural Disengagement Strategies*

*Behavioural Distraction:* This strategy involves engaging in inherently pleasant activities unrelated to the negative stimulus situation, e.g. 'I would engage in another, pleasant activity such as reading a comic book or basking in the sun'.

*Behavioural Avoidance:* This strategy involves active efforts not to engage in behaviour related to the negative situation, e.g. 'I would try to avoid those who did not want me to participate'.

#### *Cognitive Engagement Strategies*

*Cognitive Analysis:* This strategy refers to cognitive activity focused on the negative event, e.g. 'I would think about why they did not want me to participate.'

*Positive Reappraisal:* This strategy involves reframing the distressing event as less negative, benign, or positive, e.g. 'I would think to myself that it isn't that important anyway'.

#### *Cognitive Disengagement Strategies*

*Mental Distraction:* This strategy refers to engaging in thoughts unrelated to the mood-eliciting event, e.g. 'I would try to think of other, more pleasant things'.

*Mental Avoidance:* This strategy involves active efforts to not engage in thoughts related to the negative situation, e.g. 'I would try to forget that I was not allowed to participate'.

Because an important aim of the present study was to examine the qualifying effects of depressive symptoms on coping, we added the strategy of 'catastrophizing' with the expectation that it might be more likely endorsed by children high in depressive symptoms.

#### *Catastrophizing*

The strategy of 'catastrophizing' involves exaggerating the perceived negative consequences of the event, e.g. 'I would worry that other children probably never want me to join them again'.

As shown in Table 1, correlations between the above coping strategies ranged from  $r = -0.15$  to  $0.46$  (mean absolute value  $r = 0.13$ ), reflecting relatively high levels of independence between specific strategies.

#### *Dutch Version of the Child Depression Inventory (CDI; Kovacs, 1981)*

The CDI is a 27-item self-report measure designed to assess the social, behavioural, and affective symptoms of depression in children. Patterned after the adult Beck Depression Inventory (Beck *et al.*, 1961), each item consists of three sentences that describe a symptom of depression in varying degrees of severity. The respondent chooses the sentence that best describes him or her during the past week. Each item set is scored from 0 (symptom absent) to 2 (symptom is present always or most of the time). The CDI has demonstrated adequate discriminant and convergent validity, test-retest reliability, and internal consistency (Saylor *et al.*, 1984). Coefficient alpha in the present sample, using a Dutch translation of the instrument (Braet and Timbremont, 2002), was 0.79. Total scores ranged from 0 to 22 (median is 5; the top quartile (i.e. 25.2% of the participants) obtained a score of 10 or higher). The mean score was indicative of a non-clinical sample ( $M = 4.78$ ,  $S.D. = 4.07$ , see Table 2), and did not differ as a function of gender ( $p > 0.10$ ).

#### *Dutch Version of the Perceived Competence Scale for Children (PCSC, Harter, 1982)*

The PCSC is a 36-item scale developed by Harter to assess children's perceived competence in the following specific domains: scholastic competence, athletic

Table 1. Inter-correlations between coping strategies

Coping strategy	Behavioural confrontation	Problem focused	Behavioural distraction	Behavioural avoidance	Positive reappraisal	Cognitive analysis	Mental distraction	Mental avoidance	Catastrophizing
Behavioural confrontation	1								
Problem focused	0.36**	1							
Behavioural distraction	0.01	0.12	1						
Behavioural avoidance	0.01	-0.12	0.01	1					
Positive reappraisal	0.02	0.12	0.16*	0.01	1				
Cognitive analysis	0.22**	0.07	-0.03	0.08	-0.11	1			
Mental distraction	0.09	0.22**	0.31**	0.12	0.31**	-0.01	1		
Mental avoidance	-0.15*	0.01	0.22**	0.11	0.32**	-0.03	0.43**	1	
Catastrophizing	-0.01	-0.10	-0.13*	0.10	-0.07	0.36**	-0.08	-0.15*	1

Note: \*\*  $p < 0.01$ ; \*  $p < 0.05$ .



Table 2. Means and standard deviations for depressive symptoms, perceived social competence, mood impact and endorsement ratings of coping strategies

Measure	Boys (N = 123)	Girls (N = 111)	Total (N = 234)
CDI	7.22 (5.79)	6.26 (4.90)	6.76 (5.39)
PCSC	18.35 (3.98)	17.98 (3.80)	18.15 (3.61)
Mood impact	2.81 (0.88)	3.07 (0.99)	2.95 (0.95)
Behavioural confrontation	3.23 (0.92)	3.20 (0.90)	3.21 (0.90)
Problem focused	3.81 (0.69)	3.99 (0.72)	3.91 (0.71)
Behavioural distraction	4.08 (0.78)	4.04 (0.74)	4.06 (0.76)
Behavioural avoidance	2.60 (0.87)	2.66 (0.88)	2.63 (0.87)
Positive reappraisal	3.87 (0.92)	3.95 (0.86)	3.91 (0.89)
Cognitive analysis	2.71 (1.02)	2.84 (1.00)	2.78 (1.01)
Mental distraction	3.44 (0.88)	3.86 (0.82)	3.66 (0.87)
Mental avoidance	3.27 (0.96)	3.41 (0.90)	3.34 (0.93)
Catastrophizing	2.16 (1.08)	2.25 (1.06)	2.20 (1.07)

competence, behavioural conduct, social acceptance, and physical appearance. In addition, one sub-scale aims to measure global self-worth. Only the social subscale, which consists of 6 items, was administered in the current study. For each item, the child is presented with two statements (e.g. 'some children have a lot of friends' versus 'other children don't have many friends') and asked to choose the one that best describes him or her. Subsequently, the participant rates the relevant statement as 'Entirely true of me' or 'Somewhat true of me'. That choice is then rated on a 4-point scale ranging from 1 (lowest perceived competence) to 4 (highest perceived competence). The Dutch version of the PCSC has adequate internal consistency, test-retest reliability and discriminant validity (CBSK, Veerman *et al.*, 1996). Coefficient alpha in the present sample, using the Dutch version of the instrument (i.e. CBSK) was 0.75 for the social acceptance subscale. Total scores ranged from 6 to 24 ( $M = 18.15$ ,  $S.D. = 3.61$ ), and did not differ between boys and girls (see Table 2).

### Procedure

The CDI, the social subscale of the PCSC, and the vignette measures (in that order) were group-administered in the children's classrooms during regular school hours. The experimenter (a PhD student in developmental psychology) provided the children with a brief rationale indicating that the purpose of the survey was to better understand how to help children cope with difficult situations. Children were encouraged to ask any questions before beginning the survey. The regular classroom teacher remained in the room during administration of the measures. Participants completed the measures within 45 min.

## RESULTS

Our analyses were designed to address five research questions: (a) To what extent are our vignette stimuli appraised as stressful (i.e. sadness-eliciting), should they occur in real life?, (b) Is children's anticipated mood impact qualified by gender, level of depressive symptoms, perceived social competence, or their interaction?, (c) What are the most highly endorsed coping strategies, (d) What is the role of

anticipated mood impact in predicting endorsement ratings of coping strategies, and (e) After accounting for the effect of anticipated mood impact, what are the unique or interactive incremental effects of gender, level of depressive symptoms, and perceived social competence in predicting variance in coping strategy endorsement ratings?

### *Level of Anticipated Mood Impact*

Both vignettes were rated equally emotion-eliciting ( $M_1 = 2.98$ , S.D. = 1.03;  $M_2 = 2.92$ , S.D. = 1.26;  $r = 0.39$ ,  $p < 0.001$ ; see Table 2). In subsequent analysis, we therefore collapsed mood impact ratings across the two vignettes. The observed mean anticipated score of 2.95 represents an anticipated sadness of 'quite sad' on the 5-point Likert scale.

### *Factors Predicting Anticipated Mood Impact*

We examined the role of gender, CDI score, and perceived social competence score in predicting participants' mood impact rating. In view of the significant shared variance between CDI score and perceived social competence score ( $r = -0.43$ ,  $p < 0.001$ ), we conducted separate hierarchical regression analyses for these two trait variables. In the analyses, mood impact rating served as the dependent variable. Gender was entered in Step 1, the targeted trait variable (e.g. CDI score) was entered in Step 2, and the interaction between gender and the trait variable was entered in Step 3.

Results revealed a significant gender effect, with girls reporting a higher anticipated mood impact score ( $M = 3.07$ , S.D. = 0.99) than boys ( $M = 2.81$ , S.D. = 0.88):  $\beta = -0.14$ ,  $t = -2.07$ ,  $p < 0.05$ . Moreover, above and beyond the gender effect, children's mood impact ratings were significantly predicted by their level of depressive symptoms. As predicted, children displaying higher CDI scores reported a more dramatic anticipated mood effect:  $\beta = 0.16$ ,  $R^2_{\text{change}} = 0.03$ ,  $F_{\text{change}} = 5.87$ ,  $p < 0.02$ . Neither level of perceived social competence, nor the interaction between CDI and competence score was related to anticipated mood impact ratings.

### *Endorsement Ratings of Coping Strategies*

With the exception of the strategy of behavioural confrontation, the endorsement ratings of coping strategy utilization did not differ significantly between the two vignettes. Moreover, children's strategy endorsement ratings showed moderate consistency across the two rejection scenario's ( $r$  ranged from 0.34 to 0.45,  $p$ 's  $< 0.001$ ). We therefore collapsed ratings across the two vignettes in all analyses reported below. Mean endorsement ratings for each of the coping strategies are presented in Table 2. We also computed the percentage of participants who rated each strategy as a 4 or higher (i.e. most likely use the targeted strategy). As depicted in Table 3, among the nine strategies assessed, the three most highly endorsed were behavioural distraction (70.9%), problem-focused behaviour (62.9%), and positive reappraisal (58.5%).

### *Effects of Anticipated Mood Impact on Coping Strategy Endorsement Ratings*

Our analyses revealed a multivariate effect for mood impact score across the nine coping strategies: Wilks' Lambda  $F(9,211) = 6.60$ ,  $p < 0.001$ . Univariate

Table 3. Percentage of participants with high endorsement ratings ( $\geq 4$ ) for each of the coping strategies

Coping strategy	Behavioural confrontation	Problem focused	Behavioural avoidance	Behavioural distraction	Positive reappraisal	Cognitive analysis	Mental distraction	Mental avoidance	Catastrophizing
%	25.2	62.9	9.4	70.9	59.5	18.5	47.4	36.8	11.2

follow-up analyses revealed a positive association between anticipated mood impact ratings and each of the following coping strategies: behavioural confrontation ( $F(1,219) = 8.97, p < 0.01, r = 0.22$ ), cognitive analysis ( $F(1,219) = 18.70, p < 0.001, r = 0.29$ ), and catastrophizing ( $F(1,219) = 29.46, p < 0.001, r = 0.35, p < 0.001$ ). Conversely, anticipated mood impact was inversely related to ratings for mental avoidance ( $F(1,219) = 4.48, p < 0.05, r = -0.16$ ).

#### *Incremental Effects of Gender, Depressive Symptoms and Perceived Social Competence on Coping Strategy Endorsement Ratings*

A series of hierarchical regression analyses were performed to assess the incremental effects of gender, level of depressive symptoms, and their interaction on children's endorsement ratings of coping strategies after controlling for anticipated mood impact. Anticipated mood impact ratings were entered in Step 1. In Step 2, gender, and the interaction between gender and anticipated mood impact were entered. Centred CDI score was entered in Step 3, and the interactions between (a) CDI and gender, (b) CDI and mood impact, and (c) CDI, gender, and mood impact were entered in Step 4. This analysis was repeated for each of the nine coping strategies.

An identical analytic strategy was used to assess the influence of gender, perceived social competence, and their interaction on children's endorsement of coping strategies, with the exception that participants' social competence scores were entered in place of their CDI scores.

#### *Incremental Effects of Gender*

As can be seen in Table 4, a significant relationship emerged between gender and endorsement ratings for mental distraction after controlling for anticipated mood impact ( $\beta = -0.48, R^2_{\text{change}} = 0.07, F_{\text{change}} = 7.64, p < 0.05$ ). Girls reported higher endorsement of mental distraction ( $M = 3.86, S.D. = 0.82$ ) than did boys ( $M = 3.44, S.D. = 0.88$ ). Gender was not associated with endorsement ratings for any of the other coping strategies.

#### *Incremental Effects of Depressive Symptoms*

Our analyses revealed that, after accounting for the effects of mood impact and gender, level of depressive symptoms as measured by the CDI predicted additional variance in endorsement ratings for several coping strategies. Specifically, higher CDI scores were negatively associated with positive reappraisal ( $\beta = -0.20, R^2_{\text{change}} = 0.04, F_{\text{change}} = 8.97, p < 0.01$ ), problem focused behaviour ( $\beta = -0.30, R^2_{\text{change}} = 0.09, F_{\text{change}} = 21.37, p < 0.001$ ), and behavioural distraction ( $\beta = -0.12, R^2_{\text{change}} = 0.02, F_{\text{change}} = 3.32, p < 0.08$ ). The reverse pattern was observed for the strategy of catastrophizing ( $\beta = 0.31, R^2_{\text{change}} = 0.09, F_{\text{change}} = 25.21, p < 0.001$ ). These findings retained their statistical significance after controlling for perceived social competence (see Table 4).

Higher perceived social competence scores, in turn, were positively associated with behavioural confrontation ( $\beta = 0.19, R^2_{\text{change}} = 0.04, F_{\text{change}} = 8.62, p < 0.001$ ), problem focused behaviour ( $\beta = 0.27, R^2_{\text{change}} = 0.07, F_{\text{change}} = 17.37, p < 0.001$ ), and positive reappraisal ( $\beta = 0.15, R^2_{\text{change}} = 0.02, F_{\text{change}} = 4.95, p < 0.05$ ). Conversely, higher scores were negatively associated with catastrophizing ( $\beta = -0.14, R^2_{\text{change}} = 0.02, F_{\text{change}} = 5.25, p < 0.05$ ) and behavioural distraction

Table 4. Incremental effects of gender, depressive symptoms and perceived social competence on mood impact scores and coping strategy endorsement ratings

Measure	Predictor	$\beta$	S.E. $\beta$	$\Delta R^2$	$\Delta F_{\text{change}}$
Mood impact	Gender	-0.14	0.13	0.02	4.28*
	CDI	0.16	0.01	0.03	5.87*
	CDI * Gender	-0.23	0.02	0.00	0.92
	PSCS	-0.09	0.02	0.01	1.94
	PSCS * Gender	-0.67	0.04	0.01	2.78
Behavioural confrontation	Mood impact	0.22	0.06	0.05	10.97**
	Gender	0.05	0.12	0.00	0.57
	Gender * Mood impact	0.00	0.13	0.00	0.01
	CDI	-0.08	0.01	0.01	1.52
	PSCS	0.19	0.02	0.04	8.62**
	CDI <sup>a</sup>	0.01	0.01	0.00	0.01
	PSCS <sup>b</sup>	0.19	0.02	0.03	7.03**
Problem focused	Mood impact	0.11	0.05	0.01	2.49
	Gender	-0.10	0.10	0.01	2.19
	Gender * Mood impact	0.25	0.10	0.00	0.85
	CDI	-0.30	0.01	0.09	21.37**
	PSCS	0.27	0.01	0.07	17.37**
	CDI <sup>a</sup>	-0.22	0.01	0.04	9.45**
	PSCS <sup>b</sup>	0.17	0.01	0.02	5.67*
Behavioural distraction	Mood impact	-0.07	0.05	0.01	1.14
	Gender	0.01	0.10	0.00	0.02
	Gender * Mood impact	0.08	0.11	0.00	0.08
	CDI	-0.12	0.01	0.02	3.32
	PSCS	-0.16	0.01	0.03	5.67*
	CDI <sup>a</sup>	-0.25	0.01	0.05	11.05**
	PSCS <sup>b</sup>	-0.27	0.02	0.06	13.47**
Positive reappraisal	Mood impact	0.11	0.06	0.01	2.91
	Gender	-0.03	0.12	0.00	0.16
	Gender * Mood impact	0.08	0.11	0.01	1.61
	CDI	-0.20	0.01	0.04	8.97**
	PSCS	-0.15	0.02	0.02	4.95*
	CDI <sup>a</sup>	-0.16	0.01	0.02	4.91*
	PSCS <sup>b</sup>	0.07	0.02	0.00	0.98
Mental distraction	Mood impact	0.06	0.06	0.00	0.72
	Gender	-0.25	0.12	0.06	14.03**
	Gender * Mood impact	0.30	0.13	0.01	1.24
	CDI	-0.14	0.01	0.02	3.37
	PSCS	0.10	0.02	0.01	2.38
	CDI <sup>a</sup>	-0.12	0.01	0.01	2.40
	PSCS <sup>b</sup>	0.05	0.02	0.00	0.44
Catastrophizing	Mood impact	0.35	0.07	0.12	31.23**
	Gender	-0.01	0.14	0.00	0.04
	Gender * Mood impact	0.15	0.15	0.00	0.32
	CDI	0.31	0.01	0.09	25.21**
	PSCS	-0.14	0.02	0.02	5.25*
	CDI <sup>a</sup>	30	0.01	0.07	19.42**
	PSCS <sup>b</sup>	-0.01	0.02	0.00	0.02

Note: \* $p < 0.05$ ; \*\* $p < 0.01$ . CDI = Child Depression Inventory, PSCS = Perceived Social Competence.

<sup>a</sup>Incremental effect after accounting for Perceived Social Competence.

<sup>b</sup>Incremental effect after accounting for CDI score.

( $\beta = -0.16$ ,  $R^2_{\text{change}} = 0.03$ ,  $F_{\text{change}} = 5.67$ ,  $p < 0.05$ ). Subsequent multiple regression analysis showed that the effects of perceived social competence on positive reappraisal and catastrophizing lost their significance after controlling for CDI score. However, both perceived social competence and CDI score independently contributed to the prediction of problem focused behaviour and behavioural distraction (see Table 4).

## DISCUSSION

The present study sought to investigate children's anticipated appraisal (i.e. emotional upset) and anticipated coping strategies in response to hypothetical peer rejection scenarios presented in the form of brief written vignettes. We also examined the role of gender, depressive symptoms, and social competence in predicting children's appraisal and coping reactions to the stressors. The utility of using hypothetical stress vignettes to investigate coping in children is to a large extent contingent on the selection of specific vignette stimuli that are appraised as stressful/emotion eliciting should they occur in real life. Data pertaining to the anticipated emotional impact of both vignettes indicate that the scenarios were indeed appraised as moderately distressing.

Our results provide evidence to suggest that as the rejection events were appraised as more stressful, participants were more likely to engage in behavioural and cognitive engagement coping endeavours. Behaviourally, higher levels of anticipated emotional distress were positively associated with endorsement ratings for the strategy of behavioural confrontation. Cognitively, as anticipated distress increased, children were more likely to engage in cognitive analysis and less likely to mentally distract themselves. However, some children reacted with maladaptive ('depressogenic') coping as evidenced by a positive linkage between emotional distress ratings and catastrophizing thoughts. Taken together, these data suggest significant heterogeneity in participants' cognitive engagement coping.

Regardless of level of anticipated distress, the three most highly endorsed coping strategies in response to the rejection scenarios were behavioural distraction, problem-focused behaviour, and positive reappraisal. Although there has been little consistency in the use of various subtypes of coping across studies (Compas *et al.*, 2001), our findings on problem-focused behaviour converge with related studies showing that problem focused strategies are among the most highly endorsed responses to emotion-eliciting events, including peer stressors (e.g. Kochenderfer-Ladd and Skinner, 2002; Sandstrom, 2004).

Are these strategies that are most highly endorsed by our sample of children likely to be effective in reducing their emotional distress evoked by peer rejection? Although we could find no published studies directly examining the effectiveness of specific coping/emotion regulation strategies on dampening children's emotional distress, investigations with adults have examined experimentally the effects of several emotion regulation strategies on subsequent affective reactions to an emotion-eliciting situation. Specifically, adults randomized to an active behavioural distraction condition in response to a negative mood induction (i.e. self-generated imagery) showed significantly less depressed affect relative to those assigned to engage in a ruminative task (Morrow and Nolen-Hoeksema, 1990; Nolen-Hoeksema, 1991). Next, adults assigned to a cognitive reappraisal condition in which they were instructed to positively reevaluate the significance of a disgust-eliciting film clip, showed less subjective

disgust and fewer behavioural signs of disgust than those assigned to a control condition (Gross, 1998). Taken together, these data indicate that fourth and fifth-grade children are most likely to endorse strategies shown to be effective with adults.

Consistent with expectations, children differed in their appraisal of the hypothetical peer rejection scenarios. First, consistent with previous findings (Galen and Underwood, 1997), girls reported higher levels of sadness in response to the rejection vignettes than did boys. Second, children who were higher in depressive symptoms were more likely to appraise the rejection vignettes as more emotionally distressing. What might account for the observed magnification effect of depressive symptoms on anticipated distress ratings? First, the higher scores may reflect a generalized amplification effect of depressive symptoms on children's anticipated distress to a variety of emotion-eliciting events, including peer rejection. A second possibility is that depression may exert a more specific effect on children's appraisal of peer rejection. Because children with high levels of depressive symptoms are likely to have repeatedly experienced peer rejection in the past (e.g. Nolan *et al.*, 2003), they may be particularly vulnerable to peer rejection, such that reading the vignettes may lead to a marked increase in depressed mood. This worsening of mood, in turn, is likely to yield more negatively tuned anticipated distress ratings. In this context, Beck (1982) has asserted that it is the meaning of an event to the self, as represented by the match of event content and personal domain of relevance/vulnerability that predicts depressogenic emotional, cognitive and behavioural reactions.

Unexpectedly, level of perceived social competence exerted a negligible influence on children's anticipated level of distress in response to peer rejection. Perhaps having a favourable view of one's social competence/acceptance exerts its primary influence on children's perception of the *likelihood* of being rejected as opposed to the *costs* of rejection. Because of the way in which the vignettes were constructed (i.e. rejection occurred), children's sense of social efficacy may have played less of a role than it would have if the vignettes were constructed so that children had to rate the likelihood of being rejected.

Results from our moderator analyses provide some clues in understanding the observed heterogeneity in children's coping efforts. Although perceived social competence was unrelated to children's appraisal of the rejection scenario's (i.e. anticipated distress ratings), children scoring higher in perceived social efficacy displayed a marked preference for behavioural engagement coping. Specifically, these children were significantly more likely to endorse behavioural confrontation and problem focused behaviour as strategies for coping with peer rejection. These findings, which are in line with previous work (e.g. Ebata and Moos, 1991; Garber and Little, 1999), might reflect greater social skills among those reporting high social self-efficacy. These children might also predict a more favourable outcome when engaging in direct problem solving and behavioural confrontation efforts. Interestingly, as level of perceived social competence increased, children reported less use of behavioural distraction. At this point we can offer no plausible explanation for this finding.

Our findings revealed few gender differences in how children react to anticipated peer rejection. After controlling for differences in level of anticipated emotional upset, boys and girls endorsement of the targeted coping strategies were quite similar with the exception that girls were more inclined to endorse mental distraction as a coping strategy. Taken together, our findings diverge from the adult literature documenting that women are more likely than men to

ruminate in response to emotion-eliciting events (e.g. Garnefski *et al.*, 2004; Nolen-Hoeksema, 1987, 1990). One possible explanation is that a clear ruminative response style becomes more common in girls later in development (e.g. early adolescence).

With regard to depressive symptoms, children with higher levels of depressive symptoms were less likely to endorse cognitive reappraisal as a way of coping with peer rejection and more likely to endorse catastrophizing as a coping reaction. These findings on cognitive strategies converge with several other studies showing that sub-clinical depression in children and adolescents is positively related to negative automatic thoughts, catastrophizing (e.g. Garber *et al.*, 1993; Leitenberg *et al.*, 1986) and ruminative coping (Sandstrom, 2004).

Interestingly, level of depressive symptoms did not appear to influence children's endorsement of cognitive coping strategies that involve attentional deployment (e.g. mental distraction and mental avoidance). These findings provide preliminary evidence to suggest that level of depressive symptoms may exert its effects on cognitive coping efforts primarily by altering children's *evaluations* of the stressful/emotion-eliciting event, as opposed to altering children's *attentional focus* on the threat. In this context, it should be noted that where depression research has well established retrieval and recall biases for mood-congruent memories and words, there is no convincing evidence for a mood congruent attentional bias among depressed individuals (Gotlib *et al.*, 2004).

Behaviourally, children's CDI score was associated with lower endorsement of behavioural distraction and problem-focused behaviour. To the extent that engaging in other pleasant activities is judged positively, a mood congruent (i.e. negative) prediction bias might account for why children reporting higher depressive symptoms were less likely to report using behavioural distraction as a coping strategy. Several explanations may account for why children higher in depressive symptoms are less apt to endorse problem-focused behaviour as a coping strategy to deal with peer rejection. First, children higher in depressive symptoms may hold more negative views about their skills to solve interpersonal problems. A second possibility is that these children are reluctant to approach the problem because they expect that engaging in direct problem solving efforts will not be effective or will produce undesirable effects (e.g. additional distress, ruminative thoughts).

Taken together, our findings indicate that children who are high in depressive symptoms respond to peer rejection events in ways that may maintain or even intensify their—already more pronounced—negative mood. To the extent that children high in depressive symptoms are not capable of countering increases in depressed mood (i.e. sadness) by successful regulatory measures, their risk of developing clinical depression may be increased (Gross and Munoz, 1995). Moreover, children displaying high levels of depressive symptoms may be at increased risk for further peer rejection and associated maladjustment. That is, a child who responds to commonplace rejection experiences with rumination, withdrawal and sustained high levels of distress might be perceived as aversive by peers, and consequently become mired in a pattern of repeated rejection.

In as much as our findings reflect how children actually cope with peer rejection in real time, they underscore the significance of intervention efforts designed to promote a more active problem-solving approach in response to negative events among children high in depressive symptoms (e.g. assertiveness training; see Stark and Kendall, 1996). Moreover, in line with existing intervention programs for depression, especially those that originated within



the cognitive behaviour therapy tradition (e.g. Stark and Kendall, 1996), intervention efforts need to focus on teaching these children to identify their erroneous catastrophizing thoughts and provide them cognitive skills for more realistically evaluating the veridical consequences of negative emotion-eliciting events.

Several limitations of the present study deserve comment. First, we recognize the limitations of our vignette paradigm for studying coping with peer rejection and the negative emotions it elicits. Several authors have noted the potential threats in assuming that individuals' anticipated coping reactions are equivalent to their *in vivo* responses to a stressful emotionally engaging situation (e.g. Meerum Terwogt and Olthof, 1989; Robinson and Clore, 2002; Underwood, 1997). As Robinson and Clore (2002) contended, different processes are involved in different types of self-report. Specifically, when people report on coping with feelings they are not currently experiencing, they are likely to draw on sources of non-experiential information, including situation-specific beliefs and semantic knowledge about one's emotions. Conversely, online coping in response to an emotionally engaging situation is predominantly governed by the appraisal of present situational conditions, which are episodic, contextual, and experiential in nature. Hence, future research examining the congruence between children's anticipated versus online coping responses to stressful emotion-eliciting events such as peer rejection appears warranted.

Second, because all measures were based on children's self-report, it is impossible to rule out the effects of response set or response style on the observed associations between the variables. That is, we cannot rule out the possibility that our findings are partly due to shared method variance. Therefore, future studies are needed that employ both multiple sources of information (e.g. peers, parents, teachers) as well as multiple assessment modalities (e.g. self-report, behavioural observation, physiological measures).

Third, we acknowledge that our relatively large number of hierarchical regression analyses may have increased the Type I error rate. Hence, our findings, albeit largely consistent with *a priori* hypotheses, should be viewed with some caution and require replication.

Finally, our investigation of person variables qualifying children's responses to the peer rejection scenarios was limited to gender, depressive symptoms, and social competence. Obviously, several other person variables, including social standing in the peer group, externalizing problems (e.g. aggressive versus non-aggressive rejected children) and peer rejection history over time, might impact children's appraisal and subsequent coping responses. In future work, it will be important to assess the relationship between coping and a more comprehensive battery of person variables.

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